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Informed Consent Policies Governing Medical Students' Interactions with Patients

Daniel L. Cohen, M.D., Laurence B. McCullough, Ph.D., R. W. I. Kessel, Ph.D., Aristide Y. Apostolides, Ph.D., Errol R. Alden, M.D., and Kelly J. Heiderich

Abstract—When medical students become involved in patient care, concerns are raised that have ethical and possibly legal implications. In order to determine compliance with the guidelines of the U.S. government and the Joint Committee on Accreditation of Hospitals pertaining to informed consent, the authors conducted a study of hospital administrators, medical school department chairpersons, and medical school deans (with response rates ranging from 82.3 to 95.1 percent) concerning policies on student involvement in patient care. The results show that only 37.5 percent of all responding teaching hospitals specifically informed patients that students would be involved in care. Only 51 percent of the responding medical schools that specifically gave their students instruction or guidance on initial patient interaction as a matter of policy insisted that their students introduce themselves as students and clarify their role in patient care. The authors conclude that medical educators' compliance with the ethical requirements of informed consent is incomplete.

The material reported on here was presented in part at the Conference of Research in Medical Education at the Association of American Medical Colleges Annual Meeting, October 1985, Washington, D.C., and was supported in part by internal grant C08638 from the Uniformed Services University of the Health Sciences.

Dr. Cohen, a lieutenant colonel in the U.S. Air Force, is associate professor, Dr. Alden, a colonel in the U.S. Army, is professor and chairman, and Ms. Heiderich is a research assistant, all in the Department of Pediatrics; and Dr. Apostolides is associate professor, Department of Preventive Medicine and Biometrics; all are at the Uniformed Services University of the Health Sciences F. Edward Hébert School of Medicine, Bethesda, Maryland. Dr. McCullough is associate professor, Department of Community and Family Medicine, Georgetown University School of Medicine, and senior research scholar, Kennedy Institute of Ethics, Georgetown University, Washington, D.C. Dr. Kessel, now retired, formerly was dean for graduate studies, University of Maryland, Baltimore.

For related editorial, see page 861.

The involvement of medical students in the assessment and care of patients in teaching hospitals raises concerns that have ethical and possibly legal implications for students, the physicians responsible for their education, and the administrators of the teaching hospitals.

In order to guarantee the rights of patients in teaching hospitals, the U.S. government formally recommended that the functions of teaching hospitals be explained to all patients entering such institutions. Specifically, a 1973 U.S. commission report (1) states:

> . . . the patient who is about to enter such an institution should be told fully what to expect, that he will receive quality care, and that at small inconvenience if indeed any at all, he will also be making a contribution to the common good of all

> future patients. His own doctor should tell him in advance that he is expected to cooperate with the teaching program and assure him that he will not be left to the mercy of the unskilled . . . Upon admission he should be given a statement explaining the educational aims and activities of the institution and told how students, interns, and residents will participate in his care.

In support of this recommendation, the Joint Committee on Accreditation of Hospitals (JCAH) promulgated the following guideline (2) regarding the rights of patients in teaching hospitals:

> The patient has the right to know the identity and professional status of individuals providing service to him. . . . this includes the patient's right to know of the existence of any professional relationship . . . to any . . . educational institutions involved in his care. Participation by patients in clinical training programs . . . should be voluntary.

The relationship between patients and students has been discussed in the philosophical (3) and legal context (4–6), but apparently no attempt has been made to go beyond anecdotal discussion. The current study provides systematic data on the origin and methods of implementation of policies governing medical students' involvement in the assessment and care of patients, as formulated by medical educators and hospital administrators.

The hypothesis of the study was that, despite clear federal recommendations and JCAH guidelines pertaining to the rights of patients in teaching hospitals and the responsibilities of medical educators and administrators, there would be a heterogeneity of opinion among the professionals responsible for the administration of teaching hospitals and the education of medical students with respect to the implementation of these guidelines. The authors felt that this heterogeneity of opinion among the medical education professionals would become manifest with a study of the origin and nature of medical school, clinical department, and teaching hospital policies governing student interaction with patients and the variable implementation of these policies where they exist.

Methods

During the 1984–85 academic year, questionnaires designed by the authors to study the origin, nature, and methods of implementation of medical school policies governing student involvement in the assessment and care of patients were mailed to the deans and clinical department chairpersons of internal medicine, general surgery, obstetrics-gynecology, and pediatrics of all 123 fully accredited four-year allopathic medical schools in the United States. The questionnaires sent to the deans specifically sought to identify whether the medical schools had actually developed policies governing students' behavior when interacting with patients and to define the specific nature of such policies. Similar questionnaires were sent to the clinical department chairpersons at the schools in order to determine whether a medical school's policy was being implemented by the various clinical departments at the school. In addition, these questionnaires specifically addressed the issue of student participation in selected invasive aspects of both physical examination and laboratory diagnostic and/or therapeutic evaluation (lumbar puncture, bone marrow aspiration, paracentesis).

Finally, questionnaires were mailed to the chief executive officers (CEOs) of 248 major teaching hospitals (two or more hospitals affiliated with each fully accredited U.S. medical school) requesting that the officers identify and describe hospital policies dealing with the issue of student involvement with patients that may have been developed independently

of medical school policies. For each medical school, primary and secondary teaching hospitals were identified by the Association of American Medical Colleges (AAMC) *Directory of American Medical Education* (7), the directory of the AAMC's Council of Teaching Hospitals (COTH) (8), or direct inquiry to the office of the dean of each respective medical school. In instances where hospitals had affiliations with more than one medical school, selection of primary or secondary designation was based upon the authors' best estimate of the degree of affiliation as suggested by the COTH directory or by communication with the deans' offices. The secondary teaching hospitals were divided into two categories: Veterans Administration (VA) hospitals and "other" secondary hospitals (both public and private).

All the questionnaires were coded numerically prior to mailing so that individuals and institutions could not be identified during the analysis. Because of the categorical nature of the data, comparisons between groups were initially evaluated for statistical significance using the Mantel-Haenszel chi-square test (9).

Results

Response rates for deans, medical school chairpersons, and hospital chief executive officers are summarized in Table 1. The overall response rate for the deans' survey was 95.1 percent, and was virtually identical for private and public institutions. The response rates for the medical school chairpersons' was 82.3 percent overall and ranged from a low of 75.6 percent for surgical departments to a high of 87.8 percent for medicine departments. The response rate for the hospital CEOs was 84.7 percent and ranged from a low of 76.3 percent for "other" secondary hospitals (that is, those other than VA hospitals) to a high of 95.6 percent for VA hospitals.

TABLE 1

Numbers and Percentages of Medical School Deans, Clinical Department Chairpersons, and Hospital Chief Executive Officers Who Completed Questionnaires on Policies and Procedures Concerned with Informed Consent for Medical Student Participation in Patient Care and Treatment, 1984–85

Categories of Respondents*	Survey Sample	Respondents	
		No.	Percent
Deans of medical schools	123	117	95.1
Chairpersons of clinical departments			
Internal medicine	123	108	87.8
General surgery	123	93	75.6
Obstetrics-gynecology	123	103	83.7
Pediatrics	123	101	82.1
Total	492	405	82.3
Hospital chief executive officers			
Primary teaching hospitals	123	104	84.6
Secondary teaching hospitals†	125	106	84.8
Veterans Administration hospitals	45	43	95.6
Other secondary hospitals	80	63	76.3
Total	248	210	84.7

* Questionnaires were sent to the deans of all 123 fully accredited four-year medical schools in the United States and to the hospitals affiliated with them.

† Secondary hospitals were divided into two categories: Veterans Administration hospitals and all others (private and public).

In general, a majority of the 210 responding teaching hospitals did not specifically inform patients at the time of admission that medical students would be involved in their assessment and care, as shown in Figure 1. Only 37.5 percent of all responding CEOs stated that as a matter of policy their institutions specifically informed patients at the time of the admission about medical student involvement. Primary teaching hospitals were more likely to inform patients than either Veterans Administration hospitals or other secondary teaching institutions ($p < 0.01$). The 405 responding medical school clinical departments (internal medicine, general surgery, obstetrics-gynecology, and pediatrics) were more likely to inform patients specifically of medical student involvement in assessment and care than were the hospital administrative offices ($p < 0.001$). Compliance with federal recommendations and JCAH guidelines by the clinical departments ranged from 52.7 percent for surgery departments to 72.3 percent for pediatric departments.

An analysis of the responses from the medical school deans revealed that 98 (83.0 percent) of the 117 responding medical schools gave their students specific verbal or written instructions as to how to introduce themselves to patients and, therefore, clarify their role in patient assessment and care. Nineteen responding medical schools did not specifically instruct students about this aspect of patient interaction. An examination of the nature

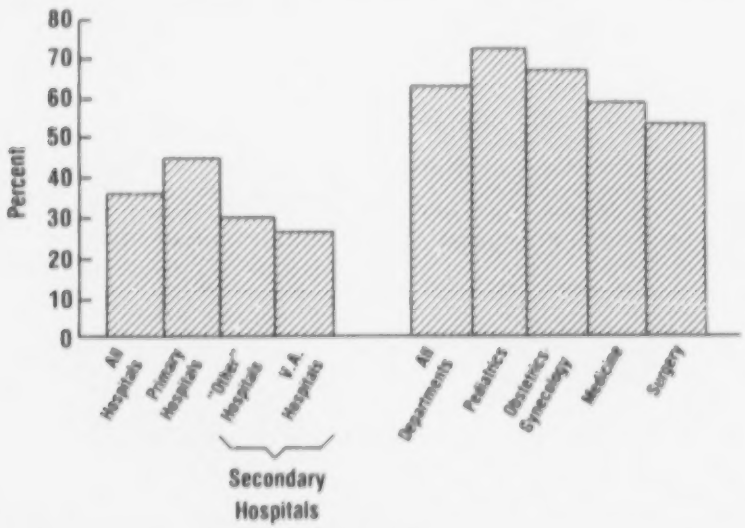

FIGURE 1

Percentages of 210 teaching hospitals (the primary teaching hospital and a secondary teaching hospital for each medical school, with the secondary hospital being either a Veterans Administration hospital or another secondary hospital) and percentages of 405 medical school clinical departments that specifically informed patients that medical students would be involved in their care and assessment (differences between all hospitals and all departments were significant at $p < .001$; differences between primary teaching hospitals and secondary teaching hospitals were significant at $p < .01$), 1984–85.

of the instruction and a comparison of it with instructions that students received independently at the teaching hospitals demonstrated a considerable heterogeneity of approaches among medical educators and administrators, as shown in Figure 2. Among these 98 medical schools, 51.0 percent specifically insisted as a matter of policy that students introduce themselves as students and thus clarify their role in patient care; 36.7 percent encouraged the students to be forthright but did not insist upon clarification of the student role; and 10.2 percent had no specific policy, although they instructed the students on this issue. A small percentage of the schools—2.1 percent—instructed their students to introduce themselves to patients as "Doctor" without further clarification of their undergraduate status. Medical school instructions were usually unwritten and were generally disseminated to students through courses in physical diagnosis or medical ethics or through clerkship orientation sessions. The department chairpersons took similar approaches with respect to the issue of clarification of the students' role.

The policies of the hospital CEOs were notably different. While 37.2 percent insisted that students clarify their role in patient care, 28.4 percent had no specific policy. Comments by several of the executive officers suggested that responsibility was left to the individual medical schools or clinical departments. However, this did not seem to be a formal arrangement.

Correlations between medical school policies (as revealed on the deans' questionnaires) and policies established by clinical department chairpersons at the same institutions were examined. Assuming that policy established by the deans and policy established by the clinical departments were not independent of each

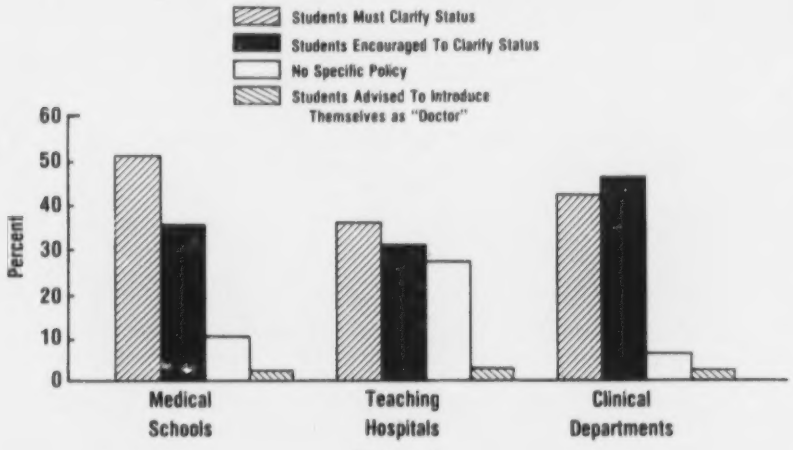

FIGURE 2

Percentages of 98 medical schools, 210 teaching hospitals, and 405 medical school clinical departments that gave each of four types of instructions (not including 17 medical schools that give no instruction) on the way students should introduce themselves when first meeting patients (comparison of schools with hospitals was significant at $p < .01$; comparison of clinical departments with hospitals was significant at $p < .001$; comparison of schools with clinical departments was not statistically significant), 1984–85.

other, the proportion of overall agreement between the two would reflect the degree to which the departments implemented the deans' policies. The responses showed that 36 to 56 percent of the departments complied with the policies of their deans (Table 2). However, if the assumption is that policy established by the deans and by the chairpersons were independent of each other, agreement beyond chance is best determined by calculation of the kappa value for measurement of non-chance agreement between pairs of observers (10). Kappa values of less than .40 are considered to represent poor agreement. Little correlation existed between deans and chairpersons beyond chance alone (with Kappa values ranging from −0.03 to 0.228). Hence, by either method of analysis, the medical school policies governing the ways students introduce themselves to patients was not consistently followed by the department chairpersons at the same institutions.

A final question dealt with the performance of invasive procedures by medical students: How do major clinical departments deal with the specific issue of informed consent from patients for medical students to participate in three invasive diagnostic or therapeutic procedures—lumbar puncture, paracentesis, and bone marrow aspiration? The results, shown in Figure 3, are limited to the departments of internal medicine and pediatrics because the three invasive procedures in question occur with highest frequency on those clinical services. The departments that stated that students were not permitted to perform invasive procedures or stated that invasive procedures were generally a rare occurrence were excluded from analysis (nine for internal medicine and 26 for pediatrics). In all instances, consent was obtained from patients for the procedures to be performed. The question here pertained to students' involvement in the procedures. In general, the departments of internal medicine and pediatrics approached the issue in the same manner. Most of these departments (65.3 percent for pediatrics and 72.7 percent for internal medicine) did not specifically inform patients (or the parent or guardian) that the students would actually perform the procedures. By their responses, these departments indicated that their position was that the team would do it together and did not designate who would actually perform the procedure. Unsolicited comments submitted by many department chairpersons expressed the opinion that medical students are members of the health care team and that

TABLE 2

Numbers and Percentages of Medical School Departments in Which Policies Concerning Clarification of Student Participation in Patient Care Implemented by the Clinical Chairpersons Agreed with Those Formulated by the Dean's Office in the Same Institution and the Kappa Value and Standard Error for the Kappa Value for Correlations Between the Two Sets of Policies, 1984–85*

Departments	No. of Dean-Chairperson Pairs	Percent	Kappa value	S.E. (k)
Medicine	86	43	.065	.08
Surgery	75	45	.127	.08
Obstetrics-gynecology	78	36	−.03	.09
Pediatrics	79	56	.228	.09

* The survey was conducted among all 123 fully accredited four-year medical schools in the United States and their affiliated teaching hospitals.

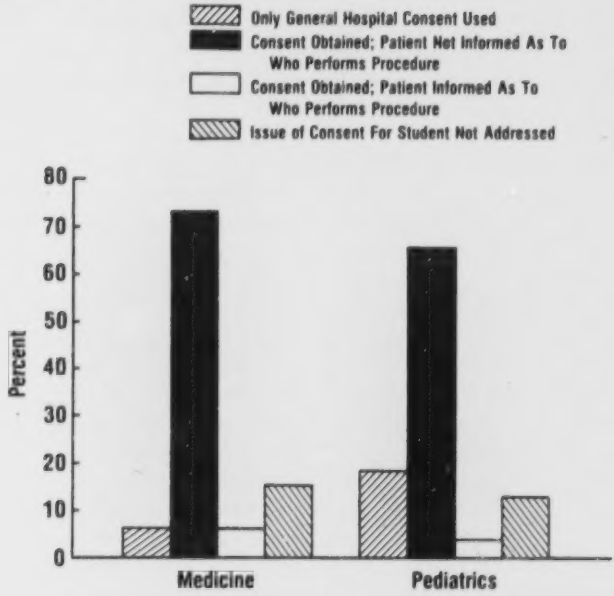

FIGURE 3

Percentages of 99 internal medicine and 75 pediatric medical school departments that used each of four approaches related to informed consent when students performed invasive procedures (lumbar puncture, bone marrow aspiration, paracentesis), 1984–85.

designation of their singular role in the performance of invasive procedures does not require further clarification. A small percentage (4.0 percent for pediatrics; 6.1 percent for internal medicine) of the clinical departments obtained consent from patients for the students to perform the procedure. Some departments (6.1 percent for internal medicine; 17.3 percent for pediatrics) did not obtain consent for specific invasive procedures but relied instead on the general consent form signed by patients (or the parent or guardian) on admission. Other departments (13.4 percent for pediatrics; 15.1 percent for internal medicine) did not specifically address the issue of informed consent for student performance of individual procedures in any manner.

For procedures requiring signed informed consent, it is customary to place on the consent form the names of all persons involved in the performance of particular diagnostic and/or therapeutic procedures. Regarding this practice, 13.2 percent of the chairpersons stated that the medical students' names were placed on consent forms for procedures the students might perform, 65.0 percent stated that this was not the practice on their clinical service, and 21.7 percent were unaware of their departmental practice.

Discussion and Conclusions

Teaching hospitals are unique environments designed to carry out major education and research while also offering high-quality medical care. They may, in

fact, be intimidating to patients. Federal and JCAH guidelines make clear that patients admitted to teaching hospitals do not relinquish the right to be involved in decisions concerning their health care.

The involvement of medical students in patient care is an issue that has never been systematically examined. The ethical basis of and requirements for informed consent are fairly well developed in the bioethical and medical literature. Disclosing information to patients about their conditions and providing them an opportunity to participate in decisions about medical interventions promote the trust of the patient in the physician, and that trust is a beneficial consequence for the patient. Informed consent also is a way of implementing a patient's moral right to determine what happens to his body. Thus, informed consent is grounded in both beneficence and respect for autonomy, two basic ethical principles in medicine (11).

The requirements of informed consent are generally understood to be three: (*a*) the disclosure of an adequate amount of information, perhaps based on a "reasonable patient" standard, about the patient's condition and the various ways it might or might not be treated; (*b*) the patient's understanding of that information, that is, interpreting it in terms of his values and beliefs and arriving at a preference; and (*c*) the patient's voluntary choice of a preferred course of treatment or nontreatment (12).

Informed consent would require that (*a*) the patient be told explicitly that medical students will be involved in treatment and care; (*b*) the patient understand the level of knowledge, skill, and experience that medical students possess; and (*c*) the patient voluntarily consent to the involvement of medical students in treatment and care. Both the guidelines of the federal government and those of the JCAH reflect this procedure in the requirements of informed consent when students are involved in patient care.

The data reported raise a number of ethical concerns. The first has to do with who holds and should discharge the ethical obligation to patients in teaching hospitals to obtain their informed consent for the involvement of students in their treatment and care. This would seem to be a shared responsibility of the teaching hospital and its affiliated medical school. The hospital assumes the ethical obligation to provide care for patients it admits, and this would include obtaining informed consent for student participation. At the same time, the medical school bears direct responsibility for the training of students and thus bears direct responsibility for the supervision of students when they are involved in patient care. That supervision contains as one of its essential elements the obligation to obtain informed consent from patients who are to become "teaching material."

The problem revealed in the data presented here, that is, the failure of significant numbers of medical schools and their teaching hospitals to conform with the ethical requirements of informed consent, may reflect a problem endemic to all bureaucratic structures: the diffusion of responsibility to such an extent that each person in the structure assumes that someone else has already dealt with such matters as informed consent. The solution to this problem involves the unequivocal assignment of responsibility and the enforcement of that responsibility by those in charge of the institutions, namely, the dean of the medical schools and the chief executive officer of the teaching hospitals.

The second ethical concern has to do with the sort of consent that hospitals and medical schools should seek from patients in teaching hospitals. The present data

suggest that a significant percentage of institutions rely on a "blanket" consent that does not explicitly include information about the involvement of medical students or information about which invasive procedures students might be performing. One justification for this may be that students are regarded as part of the health care team and that general or blanket consent covers their involvement in patient care. However, general or blanket consent becomes suspect because it does not satisfy the level of detailed disclosure required to obtain informed consent. Hence, blanket consent should be discarded in favor of more specific practices that come closer to meeting the three requirements of informed consent.

The third ethical concern involves the role of medical educators in the professional formation of medical students. As all those involved in medical education are aware, medical students do not come to their teachers fully formed in the ethical traditions of medicine; these have yet to be fully mastered and consistently displayed by them. As physicians know all too well, obtaining informed consent is sometimes a difficult matter, especially when the patient is being asked to consent to procedures that carry significant levels of risk. In such situations, physicians must learn to master their own anxiety and discomfort so that they will be better able to discharge their responsibilities regarding informed consent. Obtaining informed consent for the involvement of students in patient care can sometimes pose such difficulties—for attending physicians, residents, and students. By not obtaining explicit consent for student involvement in patient care, medical educators forfeit an important opportunity to cultivate students as ethically sensitive and responsible professionals.

Thus, instead of seeing informed consent for student involvement in patient care as merely one more legal or ethical burden, it should be seen positively, as an opportunity both to respect the patient's rights and provide significant benefit to the patient and to contribute to the development of the students' professional attitudes.

Summary

The authors studied the formulation and use of policy governing the interaction of medical students with patients in teaching hospitals in order to measure compliance with the federal and JCAH guidelines. The results showed that only 37.5 percent of all the responding teaching hospitals as a matter of policy specifically inform patients about the students' role in assessment and care. In many instances hospital administrators appeared to assume that this responsibility was discharged by the individual clinical departments (although the comments of responding chief executive officers suggested this was not a formal arrangement by any means).

Of the 83 percent of U.S. medical schools that give their students instructions with respect to patient interaction, only 51 percent insisted that students assume responsibility for clarification of their role in patient care. The implementation of medical school policy by the clinical departments is modest at best. Patient consent for medical student involvement in the performance of invasive procedures is not generally sought, and the student's role as a distinct member of the health care team is not specifically addressed.

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